

Magnetic structure of nickel nanowires after the high-density current pulse

Nurgazizov N., Bizyaev D., Bukharaev A.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, Pleiades Publishing, Ltd. Changes in the magnetic structure of nickel nanowires formed on a nonconductive surface after the high-density current pulse have been investigated using magnetic force microscopy and voltammetry. Based on the obtained experimental data and results of the computer simulation, it has been concluded that the main reason for the change in the magnetic structure is the heating of the nanowire by a current pulse. It has been shown that, during the subsequent cooling, the newly formed magnetic structure is pinned by surface roughnesses of the relief of the nanowire under investigation.

<http://dx.doi.org/10.1134/S1063783416050176>
